UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/701,845	11/05/2003	Juan Bautista Mario Lucio Magri	3143/1	7788

7590 03/24/2005

Adams Evans P.A.
2180 Two Wachovia Center
Charlotte, NC 28282

EXAMINER	
KOSSON, ROSANNE	
ART UNIT	**PAPER NUMBER**
1651	

DATE MAILED: 03/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/701,845	LUCIO MAGRI, JUAN BAUTISTA MARIO	
	Examiner	Art Unit	
	Rosanne Kosson	1651	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 February 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *1 and 2* is/are allowed.

6)☒ Claim(s) *3-4* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

The amendment filed on February 21, 2005 has been received and entered. The text of those sections of Title 35, U.S. code, not included in this action can be found in a prior office action.

Claims 1-4 are pending and are examined on the merits.

Allowable Subject Matter

Claims 1 and 2 are allowed.

Claim Rejections - 35 USC § 112

In view of Applicant's amendment deleting the word "preferably" from claim 1, the rejection under 35 USC § 112, second paragraph is withdrawn.

Claim Rejections - 35 USC § 102

Upon consideration of Applicant's arguments, the rejection of claim 3 under 35 U.S.C. 102(b) is withdrawn.

Claim Rejections - 35 USC § 103

The rejection of claim 3 under 35 U.S.C. 103(a) as being unpatentable over Scott et al. (U.S. 3,168,796), Kuykendall et al. (Applied and Environmental Microbiology 22(4):511-519, 1976) and Bergey's Manual (Bergey's Manual of Determinative

Microbiology, 8th Ed., R.E. Buchanan & N.E. Gibbons, eds., pp. 262-264,The Williams & Wilkins Co., Baltimore, 1974) in view of Guri et al. (U.S. 5,750,402) and Jung et al. (U.S. 4,755,468) was discussed in a previous Office Action.

All of Applicant's arguments have been considered, but they are not persuasive of error. Firstly, Applicant asserts that Scott differs from the claimed composition because Scott discloses a composition comprising culture medium, *Rhizobium japonicum* and a disaccharide, in which the disaccharide is added to the composition before the bacterium is cultured. The purpose of adding the saccharide is different than Applicant's purpose, which is to protect the bacterial membrane.

In reply, claim 3 is directed to a composition comprising the components disclosed in Scott and Kuykendall, as Kuykendall also discloses a composition comprising general use culture medium, grown *Rhizobium japonicum* and sterilized sugars, including maltose. For a composition claim, the order in which the components are added has no bearing on patentability, because the order of addition does not materially change the composition. Nevertheless, as noted previously, Scott discloses adding the disaccharide to the composition before and after the organism has been cultured (see col. 5, line 73, to col. 6, line 15).

Applicant notes that in preparing the composition of Scott, a step is present that is not present in Applicant's preparation method- a step of removing some of the water in the composition. Omitting this extra step, however, is not a limitation in the claims.

Applicant also asserts that the order of addition of components is essential to avoid the risk of obtaining a useless composition, i.e., a composition with dead bacteria,

as in Scott. Applicant purports that Scott teaches a method in which the bacterium is subject to destruction, so that adding a saccharide after the culturing step can have no protective effect because the bacterial cells are dead. In reply, Scott does not teach a composition in which the bacterium is dead. Scott discloses carefully removing some of the water to maintain a viable Rhizobium (as noted by Applicant, see p. 3, 1st full paragraph of the response). Removing some of the water reduces the volume for handling purposes and yields a product that is more well preserved. If the bacterium were dead, the teachings of Scott would have no utility and would not be enabled. Applicants appear to argue that this patent is not enabled and, therefore, not valid. An issued U.S. patent is presumed to be valid.

Regarding the Kuykendall reference, Applicant notes here as well that the difference between the teachings of Kuykendall and the claimed composition is that in Kuykendall the maltose is added to the Rhizobium-containing composition before the bacterium is cultured. As noted above, for a composition claim, the order in which the components are added has no bearing on patentability, because the order of addition does not materially change the composition. If potassium sorbate is added to a composition comprising culture medium, *R. japonicum*, and maltose, the bacterial membranes will be equally protected whether the maltose was added before or after culturing the bacterium. With respect to the shelf-life or degree of preservation of the claimed composition under particular storage conditions, these are not limitations recited in the claims.

Regarding Applicant's assessment of the Guri reference, Applicant discusses various compounds other than potassium sorbate that are mentioned in Guri- antibiotics, DPC and allylisothiocyanate. As previously discussed, Guri was cited because it teaches generally that potassium sorbate is a known microbicide that can be used with plant growth media. Guri does not disclose that the only way in which potassium sorbate may be used is as a component of culture medium. Similarly to Scott and Kuykendall as discussed above, potassium sorbate is present in the claimed composition and in the compositions disclosed in Guri, and the order of addition of components to the claimed composition has no bearing on patentability, because the order of addition does not materially change the composition. Applicant notes that potassium sorbate in the claimed composition is not a fungicide, but an agent that protects the Rhizobial membranes. Whether potassium sorbate is present before or after the bacterium is cultured, if it has the property of protecting the Rhizobial membranes, it does so from the time that the bacterium and the potassium sorbate are combined. It would have been obvious to one of ordinary skill in the art at the time that the invention was made to add potassium sorbate to a plant inoculating medium, because Guri teaches that potassium sorbate is an art-recognized chemical that may be used as a preservative and microbicide against unwanted microorganisms.

Regarding the Jung reference, Applicant asserts that Jung differs from the claimed invention because, although Jung teaches that fungicides may be added to a plant culture medium without altering the bacterial cells, Applicant's composition is a liquid, while the composition of Jung has been dried. Nevertheless, the composition of

Jung contains some water- the water activity is not zero- and the amount of water in the Applicant's composition is not a limitation recited in the claims. Further, Jung was cited for its disclosure that a compound that is generally recognized as a fungicide is not harmful to all bacteria- a fungicide may be used in a plant growth medium containing *Rhizobium japonicum* without harming the Rhizobium.

Applicant argues that the claimed composition is distinguishable over the cited art because the components were combined in an essential order leading to unexpected results. But, no unexpected results are presented in the specification.

In view of the foregoing, the rejection of record is maintained.

The rejection of claim 4 under 35 U.S.C. 103(a) as being unpatentable over Scott et al. (U.S. 3,168,796), Kuykendall et al. (Applied and Environmental Microbiology 22(4):511-519, 1976) and Bergey's Manual (Bergey's Manual of Determinative Microbiology, 8th Ed., R.E. Buchanan & N.E. Gibbons, eds., pp. 262-264,The Williams & Wilkins Co., Baltimore, 1974) in view of Guri et al. (U.S. 5,750,402) and Jung et al. (U.S. 4,755,468) as applied to claim 3 above, and further in view of Kosanke et al. (U.S. 5,695,541) or Gleddie et al. (U.S. 5,586,411) was discussed in a previous Office Action. The reply to Applicant's arguments concerning the Scott, Kuykendall, Guri and Jung references appears above.

Regarding the Kosanke and Gleddie references, Applicant asserts that the claimed composition differs from the prior art because, in the prior art, the peat is added to the composition after culturing the Rhizobium, while, in the claimed invention, the

peat is added to the culture medium. Applicant also asserts that the order of addition is critical because, while adding peat after culturing provides better Rhizobium viability and nodulation, adding peat before culturing provides better absorption of the Rhizobium, due to eliminating the pH difference between the Rhizobial culture and the peat. Nevertheless, both the claimed composition and the prior art compositions comprise culture medium, Rhizobium and peat. As noted above, the order of addition of the components has no bearing on patentability because, regardless of the order in which the components are added, the same composition is produced. The degree of absorption of the Rhizobium to the peat is not a limitation of the claims. Additionally, regarding Applicant's assertion of unexpected results, Tables I-III show comparisons of Rhizobial viability and nodulation between compositions prepared from peat-containing media and non-peat-containing media. Compositions containing peat added before culturing the Rhizobium and after culturing the Rhizobium were not compared. Thus, Applicant has not shown unexpected results.

In view of the foregoing, the rejection of record is maintained.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rosanne Kosson whose telephone number is 571-272-2923. The examiner can normally be reached on Monday-Friday, 8:30-6:00, with alternate Mondays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Wityshyn can be reached on 571-272-0926. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Rosanne Kosson
Examiner
Art Unit 1651

rk/2005-03-18

ROBERT A. WAX
PRIMARY EXAMINER
Art Unit 1653